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Lima, Peru, 27 to 30 May 1986

FACTORS IN THE ANALYSIS OF CONSTRAINTS ON THE DEVELOPMENT OF THE FISHERIES INDUSTRY IN LATIN AMERICA AND THE CARIBBEAN *

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INTRODUCTION

1. The Industrial Development Board of UNIDO, at its nineteenth session, held in May 1985, decided to include the First Consultation on the Fisheries Industry in the programme of Consultation meetings for the biennium 1986-1987. In accordance with that decision, the First Consultation on the Fisheries Industry will be held in June 1987.

2. Preparatory meetings will be held in Africa and Latin America to prepare for the Consultation. These meetings are intended to examine the state of the fisheries industry in the corresponding region, identify constraints on development in the sector in the developing countries in the region and determine the priority topics for the region for discussion at a global preparatory meeting, which will be responsible for selecting the topics for the Consultation.

3. For this purpose, a Latin American and Caribbean Regional Preparatory Meeting will be held in Lima, Peru, from 27 to 30 May 1986.

4. This discussion document attempts to clarify the current state of the fisheries industry in the region and its prospects in the context of the United Nations Convention on the Law of the Sea, emphasizing the constraints on development of the sector and the alternatives for a comprehensive development policy for the fisheries industry. 1/

1/ In addition to the publications cited in the text, this document is based on the conclusions of document UNIDO/PC.135, Informe Regional sobre la Industria Pesquera en Latinoamerica, by Oscar do Porto.

I. IMPORTANCE OF THE FISHERIES INDUSTRY

5. In several developing countries which have expanded their activities in the sector, the fisheries industry accounts for more than 5 per cent of GDP. Whilst it is difficult to determine the precise value added in respect of fisheries activities, because of a lack of statistical information, the experience of a number of developed countries and also developing countries shows that growth in the fisheries sector stimulates the development of a whole range of other sectors. These include transport, ship building, repairs and maintenance, manufacture of ice, chilling and deep freezing, production of animal feeds, packaging and so on. As a result of these sectoral relationships, the impact of the sector is much greater than is suggested by the figures for catches and processing. 2/

6. The importance of the sector as a creator of jobs has been pointed out on a number of occasions. According to estimates prepared by the United Nations Food and Agriculture Organization 3/ direct employment could be as much as 16 million people and the total number of people dependent on fishing for their livelihood would be in the region of 100 million, mostly in communities in developing countries engaged in artisanal fisheries. 4/

7. Fish is an important source of animal proteins and in fact provides 16 per cent of the world supply of animal protein. Its importance is particularly significant in countries which have difficulty in increasing the supply of proteins from other sources. In Latin America the consumption of fish is not a deep-rooted habit, despite the fact that it could make an effective contribution to solving serious malnutrition problems which afflict the region. So far promotion campaigns have only had a very relative success and it seems clear that an increase in consumption will only be achieved if consumer education campaigns are accompanied by a marked improvement in the refrigeration and marketing chains, together with the development of products which are reliable in terms of quality and are low in cost.

2/ In the case of Peru, it is calculated that the fisheries sector represents 3 per cent of GDP and in Chile, excluding processing, from 1.1 per cent to 2 per cent for the period 1977-1984.

3/ Agriculture toward 2000, FAO, Rome, 1981, p.82.

4/ In Peru it is estimated that the fisheries sector employs 85,000 people directly and 240,000 indirectly; in Chile direct employment is calculated at 51,000, and in Colombia 150,000 people are employed in artisanal fisheries.

II. INTRODUCTION OF THE EXCLUSIVE ECONOMIC ZONE (EEZ) AND ITS IMPACT ON THE SECTOR

8. Under the old law of the sea, fishing could be undertaken by anyone, up to a distance of six to twelve miles from the coast. There was virtual free competition for a common resource. Latin America and in particular Chile, Ecuador and Peru were the pioneers in adopting the idea of a 200 mile strip as an Exclusive Economic Zone, when they extended their sovereignty over this area by the Santiago Declaration, of 18 August 1952. From then on, conferences on the law of the sea treated this as their basic topic, until in the third, the concepts were definitively stated, establishing that the coastal State possesses "sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources" in respect of its Exclusive Economic Zone. The new law of the sea, which codifies the Exclusive Economic Zone, was adopted in 1982, with the signature of 15 countries and now has the status of de facto international legislation. 5/

9. Up to 1974-1976, when the proposed new law of the sea was generally accepted, foreign fishing fleets were regularly exploiting the waters of coastal countries. This coincided with rapid development of fishing technology (e.g. sonar equipment for detecting fish, filleting machinery, etc.) and the development of long-distance fleets by countries such as Japan, the Soviet Union, Poland, Spain, Portugal, the United Kingdom and the Federal Republic of Germany.

10. The new legal situation has changed the structure of international fisheries to the extent that coastal countries have a direct interest in exploiting a resource over which they now have rights. But many of the developing countries which have obtained jurisdiction over new resources do not have the capacity to take advantage of the new situation. Consequently, many of them have concluded agreements with other countries, permitting them access to their fishing zones, through joint enterprises or in exchange for a variety of economic benefits such as commercial premiums or privileges. 6/ In the long term, it is possible to consider that the majority of coastal countries will apply policies aimed at replacing foreign fleets with national fleets.

11. On the other hand, it has been estimated that the total fish catches (currently estimated at around 75 million metric tons per year) could be increased to 120 million tons by improving the management of over-exploited resources and increased fishing of stocks which are currently under-exploited. The majority of under-exploited fish resources are found in tropical coastal zones of developing countries, in an area between 10 and 15 miles from the coast. This has very significant implications for development policies relating to the fisheries industry and to the management of fish resources. 7/

5/ The United Nations Convention on the Law of the Sea was closed for signature on 9 December 1984, after being signed by 159 countries. The Convention will enter into force 12 months after the date of deposit of the sixtieth instrument of accession. At 19 November 1985, 25 of these instruments had been deposited with the Secretary-General.

6/ For a list of selected bilateral fishing agreements, the following FAO publication can be consulted: Fisheries Report N.293. Expert Consultation on the Conditions of Access to the Fish Resources of the EEZ, Rome 1983.

7/ World bank, Fishery, Sector Policy Paper, Washington, 1982.

12. Latin America is one of the areas in which there are still under-exploited fish resources and where significantly increased catches have been recorded in recent years. Catches increased from 6.7 million metric tons in 1975 to 11.3 million metric tons in 1984 and the region's share of the total world catches increased from 10 per cent in 1975 to 14 per cent in 1984.

13. With regard to benefits obtained from resources, very different, and in extreme cases virtually opposite, scenarios occur. While in Chile it appears that the maximum benefit is gained from the most important coastal resources, in Argentina the estimates for the maximum sustainable yield of hake is declining; Peru some years ago suffered the greatest collapse of the fisheries industry in the world and in the south of Brazil nearly all the species in the ecological system of the Laguna de los Patos have been over-fished; in other zones, such as the Colombian coast, there is almost no exploitation although there are usable marine resources in the area.

14. As a general evaluation, it can be said that the region has a considerable number of under-exploited or unexploited resources. Recently fishing has mainly been concentrated on sardines, herring and anchovies, which make up more than 40 per cent of the total and jack, mullet and saury, accounting for approximately 10 per cent.

15. On the other hand, prawn, tuna, spiny rock lobster, hake and others are lower in terms of volume but have a high value in the international market, constituting important sources of foreign exchange.

16. Particular attention is due to the impetus given in some countries to aquaculture, particularly in salt water, which could shortly be an activity in its own right, as has already happened with the great development of prawn breeding in Ecuador. Chile, Mexico, Peru and Colombia stand out as major producers in the field of mariculture and in prawn, mussel and oyster fishing in addition to the new large production of scallops in Peru as a result of the changes arising from the "El Niño" phenomenon. In Argentina the enormous growth in prawn exports and the current sharp reduction in stocks has led industrialists to study mariculture as an alternative for covering the short-fall in natural supplies. Even in countries where there has not previously been a fisheries industry, the breeding of prawns and shrimps in brackish water is nowadays attracting major investment aimed at releasing high value products onto the external market.

III. INDUSTRIAL FISHERIES AND ARTISANAL FISHERIES

17. As a result of the extended jurisdiction of developing countries over their fish resources the role of artisanal and semi-industrial fisheries has once again come up for discussion. In many countries artisanal fisheries supply up to 75 per cent of domestic demand for fish and also provide employment and income for a large number of people. Direct employment has been estimated at 30,000 in Peru, 7,000 in Santo Domingo and 50,000 in Chile. The importance of these fisheries in supplying fish for local consumption in the form of fresh fish and fish for processing is significant. Whilst in Peru the whole of the artisanal fisheries catch is destined for consumption as fresh fish, in Argentina the coastal fleet, which is semi-industrial, supplies the canneries.

18. What do we mean by industrial fisheries and artisanal fisheries? Industrial fisheries are generally understood to mean large-scale fisheries, whose production is aimed entirely at the market and whose scale enables them to fish in deep water. Artisanal fisheries are defined as meaning fishing with small boats, using little mechanization, with or without engines, and hugging the coast. The product of artisanal fisheries is largely marketed for direct human consumption. This

distinction between industrial and artisanal or large-scale and small-scale fisheries is clearly a simplification of reality since the dividing lines are not clear cut. Industrial fishing may also occur in coastal zones which could be covered by artisanal or semi-industrial fisheries.

19. It is, in any case, clear that the type of problems involved in the development of each are different. Industrial fisheries require considerable expenditure of capital, and they have high energy costs and require highly skilled labour, in terms of crew, technicians and managers. They also require support services which are scarce in developing countries, such as port infrastructure, ship repair installations, etc. Nevertheless, the economies of scale can be very significant when there are sufficient resources. Currently, in Latin America, there are a very large number of countries which have developed their industrial fisneries. Cuba has a highly developed ocean fleet which fishes outside its Exclusive Economic Zone. Argentina, Chile, Mexico and Brazil have developed large domestic fleets which in some cases co-exist with a large artisanal sector.

20. As far as resources are concerned, the main problem for industrial fisheries appears to be that they require constant and abundant fish stocks; as species migrate in an unpredictable fashion, this introduces a significant risk factor. Since large boats have to cover long distances and must preserve catches for considerable periods, factory ships containing sophisticated preservation and processing equipment have been designed.

21. Artisanal and semi-industrial fisheries include a great variety of boats, from sailing boats to small ships. In 1980 they were providing employment for 8 million fishermen, compared with 450,000 engaged in industrial fisheries and their total volume of catches was similar to that of industrial fisheries. 8/

22. In the case of coastal fishing, leaving aside social considerations, the economic calculation appears to favour artisanal fisheries since their boats are more adaptable to changes in the composition of resources. Moreover, the lower maintenance costs and the smaller amount of fuel used make them more economic. Studies have been carried out which show that for every calorie of fish extracted, artisanal fisheries use only a fifth of the fuel used by industrial ocean fisheries.

23. In addition, the building and servicing of boats and equipment can be carried out locally, with a minimum outlay of foreign exchange. Moreover, the training required to adapt new technology to improve the efficiency of artisanal fisheries is less costly and less intensive than that needed for industrial fisheries. For many Caribbean countries, this appears to be the alternative that should be promoted.

24. The lack of an adequate infrastructure for landing, handling, conservation and distribution have been identified as some of the principal problems facing artisanal fisheries. This is due to the lack of credits for small-scale fishermen on terms and conditions in keeping with their weak economic position. 9/

25. In the past, conflicts between the two sectors were smaller and isolated. This was due to the fact that the oceans were relatively under-exploited and large boats could fish near the coasts of foreign countries. The large increase in the size of fishing fleets in the last three decades and the extension of the Exclusive

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8/ David Thomson, "Conflict within the fishing industry", ICLARM, Newsletter, July 1980.

9/ FAO, Report of the FAO World Conference on Fisheries Management and Development, Rome, 1984, p.22.

Economic Zone has completely changed the position. Now the ocean fleets and the coastal fleets more frequently come into conflict. 10/

26. In summary, a large part of the fisheries potential of the developing countries occurs in the coastal fishing zone, where the best option appears to be artisanal or small-scale fisheries. In any event, ocean fishing cannot be undertaken by artisanal fisheries. It is in the interest of Governments to avoid overlapping between the two. The new law of the sea, which gives the Governments of coastal countries jurisdiction over resources and their exploitation, affords the opportunity for rational management of those resources.

IV. THE PRINCIPAL PROBLEMS CONFRONTING THE FISHERIES INDUSTRY IN THE REGION

A. Fisheries management

27. According to scenarios prepared by FAO, the demand for fish could lie between 113 and 125 million tons by the year 2000. In order to meet this demand it would be necessary to increase the exploitation of marine and inland fisheries above the current level of 75 million metric tons. 11/ In that connection it is stated that "management is an essential basis for the sound, sustained development of fisheries" and that "even where catches can be increased, there is a risk that poorly planned development can lead to over-exploitation". 12/ The FAO World Conference on Fisheries Management and Development approved a series of principles and guidelines for the rational management and optimum use of fish resources. 13/

B. Fishing fleet

28. It is not possible with the available information to draw up a general picture of the position of fishing fleets in the region. Nevertheless, it can be said that a number of Latin American countries considerably increased their industrial fishing fleets during the 1970s. Chile, for example, invested significant sums in its industrial fleet, whose tonnage rose from 25,984 GRT in 1970 to 73,601 GRT in 1981. It currently comprises 350 ships, including 11 factory ships. The fleet has an average age of between 10 and 12 years, but it is being thoroughly overhauled and provided with modern equipment. The Peruvian industrial fleet grew significantly during the early 1970s, from 13,000 GRT hold capacity in 1970 to 73,000 GRT in 1973, but with the change in the composition of its fish resources the fleet had to be changed and reduced to 61,700 GRT in 1980 and 35,916 GRT in 1981.

29. Investment in fishing boats has also been considerable in Argentina. The fishing fleet currently comprises 486 boats with a nominal fishing capacity of 1.4 million tons, although in reality it allows catches of the order of 830,000 metric tons per year. The average age of the fleet is 20 years, 19 for the 122 ships of the conventional "fresh fish" fleet, which supplies the refrigerator ships, 13 for the freezer and factory ships and 30 for the coastal fleet. The

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10/ World Bank, op.cit.

11/ Agriculture towards 2000, FAO, 1981.

12/ FAO, Report of the World Conference on Fisheries Management and Development, Rome, 1984, p.36.

13/ FAO, op.cit, p.17.

latter includes the short-range fleet consisting of 68 vessels which were mostly built between 1947 and 1960. The great age of the fleet seems to be a significant obstacle to the development of the Argentine fisheries industry.

30. Other countries have also considerably increased their fisheries capacity. Between 1975 and 1988, Brazil doubled its fleet, from 50,474 GRT to 99,595 GRT. The increase for Uruguay was from 3,401 GRT in 1970 to 16,830 GRT in 1981. Mexico appears to have the largest industrial fleet in the region, with 324,032 GRT. 14/

31. The development of the fishing fleet has been based only partly on local construction. Some boats have been built in the region, but practically all of the ocean fleet is composed of imported boats. In recent years some countries have built, or are planning to build in the future, installations for shipbuilding and shiprepairing. In some cases, such as that of Brazil, there has been major investment, as a result of which shipbuilding has become a significant export activity.

32. In this context it is interesting to recall the conclusions and recommendations of the Expert Group Meeting on Small-Scale Shipbuilding and Shiprepair Development for Latin American and Caribbean Countries which took place in Havana, between 9 and 12 November 1982. 15/ The experts concluded that the state of the shipbuilding and shiprepair industry in countries in the region not only showed great differences in the methods of development, but also in the levels achieved. The experts also indicated obstacles to the development of the shipbuilding and shiprepair industry in the region, which included:

- The low level of development of ancillary industry;
- Insufficient well-trained planners, technicians and managers and the inadequate utilization of those available in some countries of the region;
- Insufficient equipment in most existing shipyards;
- The lack of maintenance programmes for ships in operation;
- The little use being made of standardization of equipment, computation methods, etc.

33. The participants recommended to the Governments of the Latin American and Caribbean countries that, with the support of regional and international organizations, they needed to establish a Latin American co-operation programme for the construction and repair of small boats, particularly fishing boats. The proposed co-operation programme could include, inter alia, the following activities:

- Identification of specific machineries for co-operation between countries of the region;
- The obtaining and distribution of scientific and technical information on the current development of shipbuilding and shiprepair world wide;

14/ FAO, Fishery Statistics, 1985.

15/ Final report of the Expert Group Meeting on Small-Scale Shipbuilding and Shiprepair Development for Latin American and Caribbean Countries, Havana, 9-12 November 1982, ID/WG.375/43, UNIDO, Vienna.

- Formulation and execution of joint collaboration programmes for the construction and repair of small boats;

- Preparation and introduction of training plans for high- and medium-level technical staff and guaranteeing of the availability in the future of staf qualified in shipbuilding and shiprepair, including the introduction of ne technologies in shipbuilding and shiprepair and the development of ancillary industries.

C. Port and handling infrastructure

34. The scant attention so far paid by Governments in the region to fisheries activity is evidenced by the lack of adequate mechanisms in the port infrastructur and in marketing at the primary sale stage. Moreover, in cases where major investments have been made for this purpose, there has been no co-ordination with those intended to use the installations, who have therefore not taken proper advantage of the facilities afforded, as happens for example in the big fishing terminals built in Peru and the unloading wharfs for the artisanal fisheries in Brazilian Amazonia.

35. Full development of fisheries activities requires installations on the coast for preparing the ships and fishing equipment and for receiving the fish which is then to be processed. Industrial fisheries require larger and more complex installations, but these can be shared between artisanal and semi-industrial fisheries. The installations required include: equipment for hauling up boats fo repair and inspection in the case of small boats, docks and repair installations for larger boats, workshops for maintenance and repair of boats and fishing equipment, refrigerated warehouses for the storage of fresh fish, ice-making machines and ice-storage areas, packaging installations, refrigerated transport to take the fish to consumption centres or factories, etc.

36. The lack of an adequate infrastructure ashore has been recognized by various international bodies as one of the constraints on the development of artisanal fisheries. 16/ It has been said that the fact that artisanal fisheries maintain a primitive technology for handling and processing results in significant losses of catches and that if the quality of land installations were improved together with the marketing procedures for artisanal and semi-industrial fisheries, these would have clear advantages over industrial fisheries in coastal fishing. For this reason it has been suggested that the capital investment necessary to improve handling and distribution systems should form part of artisanal and semi-industria fisheries development projects.

D. Processing

37. As far as processing capacity is concerned, it can be said that at the presen time the majority of countries in the region with significant industrially usable resources have a processing capacity corresponding to the volume of available resources and, in some cases, over-capacity. Those countries which up to now have not developed their fisheries industry owing to the economic difficulties they are encountering and the burden of a negative fisheries trade balance have reached the point where they now are attempting to achieve import-substitution as far as possible but still on the basis of imported raw materials.

38. Taking the region as a whole, the fisheries industry continues to be mainly concerned with reduction, due to the strong external demand and the possibility of profitable operation of fish meal production. It should be borne in mind that the

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16/ World Bank, op.cit., and FAO, op.cit.

share of Latin America in the world total of fish-meal exports was 43 per cent in 1983. Production for direct human consumption has shown an increase, but not one which is commensurate with food requirements of the region. This is due to the fact that fisheries activity has been based primarily on exports and furthermore because very often sea products are not easily accessible to peoples who in the main have a low purchasing power.

39. The case of Peru deserves particular attention because its fisheries industry has suffered the impact of the change in the biological composition of the Peruvian sea under the effects of the "El Niño" phenomenon. While the anchovy was present, production of fish meal and fish oil steadily increased until Peru became the leading exporter of fish products in the world. With the decline of the anchovy and the appearance of large volumes of commercial species such as the sardine, jack and mackerel, it has become necessary to redirect the industry towards products for direct human consumption. The fish meal and fish oil industry entered a crisis after 1976 as a result of a drastic decline in anchovy catches. The present position is that productive capacity is being restructured, reducing the number of production units. On the other hand, the canning industry has grown extremely rapidly since 1976, as a result of the greater availability of sardines, which has led to excessive installed capacity in terms of the permitted catch.

40. The frozen fish industry presents problems similar to those of the canning industry. Its growth was based on exploitation of the hake. When the population stocks of this species declined, there was a significant decrease in the utilization of installed capacity. Over-capacity in part of the fisheries industry owing to changes in the composition of catches make it necessry for the Peruvian fisheries industry to readapt towards a type of production largely aimed at direct human consumption, both domestic and export.

E. Technology

41. In recent years Latin American Governments have shown some interest in developing technologies aimed at finding alternative methods of production for human consumption, making better use of the species available in large volumes and in turn obtaining products affording the possibility of large-scale consumption because of their low cost. Cuba, Mexico and Peru, followed by Ecuador, El Salvador, Nicaragua and Venezuela have made significant advances in this area.

42. Those countries developing the reduction industry (Peru and Chile), the refrigeration industry (Argentina and Uruguay) and the canning industry (Ecuador, Peru and Chile), in order to enter foreign markets with their products have had to incorporate technologies allowing them to compete internationally. Hence the various stages in the productive cycle have had to be optimized. Notable in this connection are the high yield of fishing boats engaged in ocean fishing in Chile, and the efficiency displayed in the processing of these resources to obtain fish meal.

43. In the area of frozen white fish production in Argentina and Uruguay, there have been levels of yield notable for the utilization of labour, machinery and equipment available in the market. Argentina in particular has managed to produce nearly all its machinery and equipment locally with the exception of filleting machines and certain high-technology elements in refrigeration equipment. It is a fact that in Argentina a whole fisheries supply industry has developed, which has been able to export turnkey plants in the refrigeration branch. In this area in particular, and in canning, Brazil too has achieved a large measure of technological self-sufficiency.

F. Domestic marketing

44. It has already been stated above that to achieve greater domestic consumption of fish products it is essential to improve refrigeration and marketing chains, and develop new products which are of reliable quality and low in cost.

45. Except in those cases where consumption centres are close to ports, marketing is not undertaken by the fisherman himself but by middle-men who possess refrigerated transport and who are able to manipulate prices in their favour. In order to achieve a more equitable distribution of the benefits of fisheries it is necessary to create alternative marketing systems. These range from the participation of the fishermen themselves in marketing to State intervention. The option which seems to have given the best results is the formation of fishermen's co-operatives, which can provide other types of services in addition to marketing (such as maintenance workshops, warehousing infrastructure, etc.). This clearly requires major institutional support.

G. International trade

46. Prior to the application of the new law of the sea about a third of world production of fishery products were marketed internationally. Since the application of the new system, which is estimated to have redistributed 14 million tons or approximately 20 per cent of the annual world catch, some countries have gone from being major exporters of fish and sea products to being net importers. Spain, for example, which lost its access to fishing zones outside its Exclusive Economic Zone, has gone from being a net exporter in the 1970s to being a net importer at the present time. The case of Japan is similar, although this trend was already beginning in the mid-1970s. 17/

47. In 1983 the volume of international trade in fishery products was 10.8 million tons, or 37.8 per cent of world production. Imports were highly concentrated in a few countries. Six developed countries (Japan, United States of America, France, United Kingdom, Federal Republic of Germany and Italy) imported two thirds of the international trade in fishery products, worth in that year $16.6 million. The share of Latin America in the value of exports was 12.9 per cent.

48. Tariff and non-tariff barriers constitute a significant constraint to international trade. In the first place protectionist tariffs deserve mention, since they increase the level of processing, thus excluding the import of products with greater added value. Another significant problem is that of preferential agreements. It is under such agreements that 39 per cent of EEC imports enter, while Japanese and North American imports under these arrangements attain only 12 and 2 per cent, respectively. Furthermore the use of quotas, which set lower tariffs for a determined quantity of imported fish, is widespread. Finally, health regulations, specifications and requirements in respect of packaging can create obstacles to trade. 18/

49. For the region as a whole, average exports of fish products show a rising trend in the period 1980-1984, having reached $US 2,027 million in 1983. Imports, on the other hand, are tending to decline: thus, in 1980, imports were equivalent to 24 per cent of exports, while in 1984 they represented 16 per cent of the exported value, so that the trade balance for fishery products showed an average surplus for the five years of $1.7 billion.

17/ C. C. Schmidt - Trade in Fish - OECD Observer, No. 137, November 1985.

18/ C. C. Schmidt, op cit.

50. Despite the fact that the export fisheries industry in Latin America is structured around a narrow range of products, there have been some signs of a trend towards diversification in recent years. Chile leads in volume of exports, with around 50 per cent of the volume exported by the region, followed by Peru in second place, then Argentina, Uruguay, Ecuador, Mexico and Cuba.

PRODUCTION AND EXPORT OF SEVEN GROUPS OF FISHERY PRODUCTS
IN LATIN AMERICA AND THE CARIBBEAN
(in millions)

			1979	1980	1981	1982	1983
Fish, fresh, chilled or frozen	Production	MT	499.5	603.9	548.3	530.6	510.4
	Exports	MT	373.6	418.2	365.7	387.5	350.3
		$US	332.5	374.5	373.7	314.4	280.1
Fish, dried, salted or smoked	Production	MT	70.0	80.8	70.5	78.3	70.9
	Exports	MT	9.9	7.9	4.9	10.1	3.2
		$US	12.7	13.2	13.6	13.1	6.5
Crustaceans and molluscs, fresh, frozen, dried, salted, etc.	Production	MT	185.3	122.3	130.4	176.9	202.4
	Exports	MT	124.5	135.7	121.8	159.5	164.2
		$US	906.7	1 009.5	981.6	1 089.9	1 227.7
Fish, canned	Production	MT	322.2	454.2	431.0	344.6	271.8
	Exports	MT	79.1	142.6	144.8	101.6	54.5
		$US	97.6	170.9	158.3	101.9	59.4
Crustaceans and molluscs, canned	Production	MT	5.2	7.7	9.0	5.2	6.5
	Exports	MT	5.1	4.1	4.2	3.5	4.9
		$US	28.7	29.9	26.3	23.3	31.9
Oils and fats	Production	MT	267.7	238.8	238.7	384.7	79.7
	Exports	MT	118.7	225.2	76.0	179.3	24.6
		$US	47.5	43.1	28.4	53.3	8.2
Fish Meals	Production	MT	1 441.9	1 346.7	1 489.8	1 723.1	1 200.4
	Exports	MT	1 028.5	1 053.3	961.0	1 506.6	1 024.7
		$US	300.2	458.7	421.9	497.6	411.6
TOTAL EXPORTS		$US	1 714.0	2 100.0	2 004.0	2 094.0	2 027.0

Source: FAO Yearbook of Fishery Statistics, 1981 and 1983, vols. 53 and 57.

PRINCIPAL FISHERY PRODUCT EXPORTING COUNTRIES
IN LATIN AMERICA AND THE CARIBBEAN
(in millions of US$)

1983

Fish, fresh, chilled or frozen	Total	280.1
	Argentina	99.4
	Chile	30.7
	Uruguay	40.3
Fish, dried, salted or smoked	Total	6.5
	Argentina	3.9
	Brazil	2.0
Crustaceans and molluscs, fresh, frozen, dried, salted, etc.	Total	1 227.7
	Mexico	380.5
	Ecuador	200.0
	Brazil	98.5
Fish, canned	Total	59.4
	Chile	17.2
	Peru	16.3
Crustaceans and molluscs, canned	Total	31.9
	Mexico	8.2
	Panama	6.4
	Chile	13.6
Oils and fats	Total	8.2
	Chile	6.7
Fish Meals	Total	411.6
	Chile	307.6
	Peru	81.4

Source: FAO Yearbook of Fishery Statistics, 1983, vol.57.